



SMC-02-398

December 15, 2003

To: Commissioner for Patents
P.O.Box 1450
Alexandria, VA 22313-1450

Fr: George O. Saile, Reg. No. 19,572
28 Davis Avenue
Poughkeepsie, N.Y. 12603

Subject: | Serial No. 10/669,516 09/24/03 |

Dun-Nian Yaung et al.

QUANTUM EFFICIENCY ENHANCEMENT FOR
CMOS IMAGING SENSOR WITH BORDERLESS
CONTACT

INFORMATION DISCLOSURE STATEMENT

Enclosed is Form PTO-1449, Information Disclosure Citation
In An Application.


The following Patents and/or Publications are submitted to
comply with the duty of disclosure under CFR 1.97-1.99 and
37 CFR 1.56.

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being
deposited with the United States Postal Service as first class
mail in an envelope addressed to: Commissioner for Patents,
P.O. Box 1450, Alexandria, VA 22313-1450, on December 19, 2003.

Stephen B. Ackerman, Reg.# 37761

Signature/Date

 12/19/03

U.S. Patent 6,040,592 to McDaniel et al., "Well to Substrate Photodiode for Use in a CMOS Sensor on a Salicide Process," discloses a photodiode and isolation process.

U.S. Patent 6,372,603 to Yaung et al., "Photodiode with Tightly-Controlled Junction Profile for CMOS Image Sensor with STI Process," discloses a sensor and STI process.

U.S. Patent 6,130,422 to Bawolek et al., "Embedded Dielectric Film for Quantum Efficiency Enhancement in a CMOS Imaging Device," discloses an embedded dielectric film for an image device.

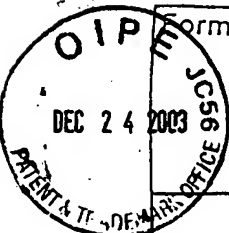
The following two U.S. Patents both describe a borderless contact process with an etch stop:

- 1) U.S. Patent 6,406,987 to Huang, "Method for Making Borderless Contacts to Active Device Regions and Overlaying Shallow Trench Isolation Regions."
- 2) U.S. Patent 6,258,712 to Wang, "Method for Forming a Borderless Contact."

Sincerely,

A handwritten signature in black ink, appearing to read "SBA", written over the word "Sincerely,".

Stephen B. Ackerman,
Reg. No. 37761



1071

Form PTO-1449	Doc No (Number) (Copies)	Application Number
INFORMATION DISCLOSURE CITATION IN AN APPLICATION (Use several sheets if necessary)	TSMC-02-398	10/669,516
	Applicant	Dun-Nian Young et al.
	Filing Date	09/24/03
	Group Art Unit	

U. S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	6040592	3/21/00	McDaniel et al.	257	292	6/12/97
	6372603	4/16/02	Young et al.	438	424	7/7/00
	6130422	10/10/00	Bawotek et al.	250	208.1	6/29/98
	6406987	6/18/02	Huang	438	595	9/8/98
	6258712	7/10/01	Wang	438	634	2/1/99

FOREIGN PATENT DOCUMENTS

	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	Translation	
						YES	NO

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

EXAMINER	DATE CONSIDERED
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EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP § 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to the applicant.